

APPENDIX A
"CLEAN" VERSION OF EACH PARAGRAPH/SECTION/CLAIM
37 C.F.R. § 1.121(b)(ii) AND (c)(i)

1. (Amended) A method for achieving client to server end to end security guarantees, comprising:

employing a proxy between a client and a server to provide connection links between said client and said server;


embedding a secure coprocessor for use as an agent of said client and/or said server;

said coprocessor is located at the site of said proxy and: (a) acts as a converter between at least one protocol said client supports, and at least one other protocol supported by said server, (b) assures that said proxy cannot tamper with the functioning of said agent, (c) guarantees that an application embedded in said coprocessor performs to a degree of security proscribed by said client and/or said server; and

employing the respective security protocols of said at least one protocol and said at least one other protocol.

26. (Amended) A system to control security of a proxy interconnecting a client to a server, comprising:


a secure coprocessor, used as an agent of the client and/or a server, said secure coprocessor being located at the site of said proxy ; and

 an application embedded in said secure coprocessor which acts as a converter between at least one protocol said client supports and at least one other protocol supported by said server, wherein said secure coprocessor employs respective security protocols of said at least one protocol and said at least one other protocol; said secure coprocessor also assuring that said proxy cannot tamper with the functioning of said agent, and guaranteeing that an application embedded in said coprocessor performs to a degree of security proscribed by said client and/or said server.

35. (Amended) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for achieving client to server end to end security guarantees, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect:

employing a proxy between a client and a server to provide connection links between said client and said server;

embedding a secure coprocessor for use as an agent of said client and/or [the] said server;

 said coprocessor is located at said proxy and: (a) acts as a converter between at least one protocol said client supports, and at least one other protocol supported by said server, (b) assures that said proxy cannot tamper with the functioning of said agent, and (c) and guarantees that an application embedded in said coprocessor performs to a degree of security proscribed by said client and/or said server;

employing the respective security protocols of said at least one protocol and said at least one other protocol.

38. (Amended) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for achieving client to server end to end security guarantees, the computer readable program code means in said article of manufacture further comprising computer readable program code means for causing a computer to effect:

employing a proxy between a client and a server to provide connection links between said client and said server;

embedding a secure coprocessor for use as an agent of said client and/or said server;

said coprocessor is located at said proxy site and: (a) acts as a converter between at least one protocol said client supports, and at least one other protocol supported by said server, (b) assures that said proxy cannot tamper with the functioning of said agent, and (c) adapts content supplied by said server to fit constraints of said client and/or connection links.

employing the respective security protocols of said at least one protocol and said at least one other protocol.

39. (Amended) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for achieving client to server end to end security guarantees, the computer readable program code means in said article of manufacture further comprising computer readable program code means for causing a computer to effect:

employing a proxy between a client and a server to provide connection links between said client and said server;

embedding a secure coprocessor for use as an agent of said client and/or said server;

said coprocessor is located at said proxy site and: (a) acts as a converter between at least one protocol said client supports, and at least one other protocol supported by said server, (b) assures that said proxy cannot tamper with the functioning of said agent, and (c) adapts content supplied by said server to fit constraints of said server and connection links;

employing the respective security protocols of said at least one protocol and said at least one other protocol.

40. (Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect:

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securely embedding an agent at the site of a proxy in the network, and

splicing [a plurality of secure communication protocols of different protocol suites into the agent] a security protocol of a Wireless Applications Protocol suite (WAP) to that of the Internet Protocol (IP) suite.

42. (Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect:

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securely embedding an agent at a proxy in the network, and

splicing a plurality of secure communication protocols of different protocol suites into said agent, wherein said splicing includes maintaining end to end security guarantees at said server.

43. (Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product further comprising computer readable program code means for causing a computer to effect:

securely embedding an agent at a proxy in the network, and

said agent performing at least one content adaptation function;

splicing a plurality of secure communication protocols of different protocol suites into said agent.

44. (Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product further comprising computer readable program code means for causing a computer to effect :

securely embedding an agent at a proxy in the network, and

splicing a plurality of secure communication protocols of different protocol suites into said agent;

maintaining a state of said splicing process resulting from said step of splicing, wherein said step of maintaining includes employing a storage device external to said proxy, and using cryptographic means to encrypt the state of a splicing process resulting from the step of splicing.

APPENDIX B
VERSION WITH MARKINGS TO SHOW CHANGES MADE
37 C.F.R. § 1.121(b)(iii) AND (c)(ii)

CLAIMS:

1. (Amended) A method for achieving client to server end to end security guarantees, [the method] comprising:

employing a proxy between [the] a client and [the] a server to provide connection links between said client and said server;

embedding a secure coprocessor for use as an agent of [the] said client and/or [the] said server;

[the] said coprocessor is located at the site of said proxy and: (a) [acting] acts as a converter between at least one protocol [the] said client supports, and at least one other protocol supported by [the] said server, (b) assures that said proxy cannot tamper with the functioning of said agent, (c) guarantees that an application embedded in said coprocessor performs to a degree of security proscribed by said client and/or said server; and

employing the respective security protocols of said at least one protocol and said at least one other protocol.

26. (Amended) A system to control security of a proxy interconnecting a client to a server, [the system] comprising:

a secure coprocessor, used as an agent of the client and/or [the] a server, said secure coprocessor being located at the site of said proxy ; and

an application embedded in [the] said secure coprocessor which acts as a converter between at least one protocol [the] said client supports and at least one other protocol supported by [the] said server, wherein [the] said secure coprocessor employs respective security protocols of said at least one protocol and said at least one other protocol; said secure coprocessor also assuring that said proxy cannot tamper with the functioning of said agent, and guaranteeing that an application embedded in said coprocessor performs to a degree of security proscribed by said client and/or said server.

35. (Amended) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein for achieving client to server end to end security guarantees, the computer readable program code means in said article of manufacture comprising computer readable program code means for causing a computer to effect:

employing a proxy between [the] a client and [the] a server to provide connection links between [the] said client and [the] said server;

embedding a secure coprocessor for use as an agent of [the] said client and/or [the] said server;

[the] said coprocessor is located at said proxy and: (a) [acting] acts as a converter between at least one protocol [the] said client supports, and at least one other protocol supported by [the] said server, (b) assures that said proxy cannot tamper with the functioning of said agent, and (c) and guarantees that an application embedded in [the] said coprocessor performs to a degree of security proscribed by [the] said client and/or said server;

employing the respective security protocols of said at least one protocol and said at least one other protocol.

38. (Amended) An article of manufacture [as recited in Claim 35] comprising a computer usable medium having computer readable program code means embodied therein for achieving client to server end to end security guarantees, the computer readable program code means in said article of manufacture further comprising computer readable program code means for causing a computer to effect:

employing a proxy between a client and a server to provide connection links between said client and said server;

embedding a secure coprocessor for use as an agent of [the] said client and/or [the] said server;

[the] said coprocessor is located at said proxy site and: (a) acts as a converter between at least one protocol [the] said client supports, and at least one other protocol supported by [the] said server, (b) assures that said proxy cannot tamper with the functioning of said agent, and (c) [adapting] adapts content supplied by [the] said server to fit constraints of [the] said client and/or [the] connection links.

employing the respective security protocols of said at least one protocol and said at least one other protocol.

39. (Amended) An article of manufacture [as recited in Claim 35] comprising a computer usable medium having computer readable program code means embodied therein for achieving client to server end to end security guarantees, the computer readable program code means in said article of manufacture further comprising computer readable program code means for causing a computer to effect:

employing a proxy between a client and a server to provide connection links between said client and said server;

embedding a secure coprocessor for use as an agent of [the] said client and/or [the] said server;

[the] said coprocessor is located at said proxy site and: (a) acts as a converter between at least one protocol [the] said client supports, and at least one other protocol supported by [the] said server, (b) assures that said proxy cannot tamper with the functioning of said agent, and (c) [adapting] adapts content supplied by [the] said server to fit constraints of [the] said server and [the] connection links.

employing the respective security protocols of said at least one protocol and said at least one other protocol.

40. (Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect:

securely embedding an agent at the site of a proxy in the network, and

splicing [a plurality of secure communication protocols of different protocol suites into the agent] a security protocol of a Wireless Applications Protocol suite (WAP) to that of the Internet Protocol (IP) suite.

42. (Amended) A computer program product [as recited in Claim 40] comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect:

securely embedding an agent at a proxy in the network, and

splicing a plurality of secure communication protocols of different protocol suites into said agent, wherein [the] said splicing includes maintaining end to end security guarantees at said server.

43. (Amended) A computer program product [as recited in Claim 40,] comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product further comprising computer readable program code means for causing a computer to effect:

securely embedding an agent at a proxy in the network, and

[the step of the] said agent performing at least one content adaptation function;

splicing a plurality of secure communication protocols of different protocol suites into said agent.

44. (Amended) A computer program product [as recited in Claim 40,] comprising a computer usable medium having computer readable program code means embodied therein for providing secure communication on a network, the computer readable program code means in said computer program product further comprising computer readable program code means for causing a computer to effect :

securely embedding an agent at a proxy in the network, and

splicing a plurality of secure communication protocols of different protocol suites into said agent;

[the step of] maintaining a state of said splicing process resulting from [the] said step of splicing, wherein said step of maintaining includes employing a storage device external to [the] said proxy, and using cryptographic means to encrypt the state of a splicing process resulting from the step of splicing.